



Full Length Article

Facebook as learning platform: Argumentation superhighway or dead-end street?



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ABSTRACT

Facebook® and other Social Network Sites are often seen by educators as multifunctional platforms that can be used for teaching, learning and/or the facilitation of both. One such strand is making use of them as tools/platforms for using and learning through argumentation and discussion. Research on whether this 'promise' is actually achieved – also the research reported on in this Special Issue – does not unequivocally answer the question of whether this is a good idea. This article as one of the two closing articles of this Special Issue discusses Social Networking Sites in general and Facebook specifically with respect to how they are 'normally' used by their members as well as with respect to their social and technical features. Then, in light of this, it discusses the learning results of the four studies. It concludes with a short discussion of whether they are capable of meeting the promise that many think they can.

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1. Introduction

A screwdriver can at times do the work of a chisel, though the cut made will not be really clean. There is also the saying that if the only tool you have is a hammer, you treat everything as if it were a nail. Kaplan (1964) called this the *law of the instrument*; using one instrument for all purposes. The question as to whether it is possible that this law is now being applied to using social networking sites (SNSs) in general and Facebook® in particular as tools/environments for learning, knowledge construction, argumentation, discussion and so further is particularly salient in this Special Issue. This does not mean that Facebook cannot function as a platform for debate. In a small-scale study Kushin and Kitchener (2009) found that with respect to a politically oriented Facebook group, primary usage of the Facebook group was for expressing support for a stated position of the Facebook group, a minority of posters (17%) did express opposition. They, however, did note that of the top ten participants, seven supported the premise of the group and did this in a "civil" way and three did not and their opposition was characterized as "uncivil". They also place the caveat that because of the focused nature of their study on one Facebook group, the "results cannot be generalized to other

Facebook groups or to political discussion on Social Network Sites in general" (n.p.).

The article will first discuss whether SNSs in general and Facebook in particular – with their specific functionalities – are really suitable for use as tools or platforms for argumentation, discussion and knowledge construction; called Argument Knowledge Construction in a number of articles in this issue. Regardless of the answer, the article then proceeds to briefly discuss whether adolescents and young adults are actually able to effectively use SNSs for knowledge construction and/or creation. Having done this, it continues with a discussion of the results of the four studies in this Special Issue with respect to learning and possible future directions of research based on the results. It ends with some conclusions about the results of the four studies and a discussion of learning with SNSs in general.

2. Is Facebook a good platform for argumentation and discussion?

Let us begin with an experiment. If you have a Facebook account or local variant thereof, go to it and take a look at your last ten or twenty posts/status updates' and those of a few of your Facebook-friends. Whom have you/they written about? What/how have your and their 'friends' responded to those updates? Chances are that most, if not all, of your posts were either about you, where you were, what you were doing and so forth or they were links to things that interest you or that you hold an opinion about (this includes links to kitten videos and the like, though I

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hope that you really do not have strong feelings about them). The same is probably true for your friends. And if we look at how your Facebook-friends reacted to your posts, their reactions were most probably either simple 'likes' or were comments expressing agreement in some way. The chance that you got into a good argument or discussion about the status update is not very likely. That is not really strange if one takes a good look at Facebook.

First, Facebook – though called a social networking tool – is more often than not used by its members primarily as a broadcast medium for spreading what they think and feel either to the world at large or to their friends, depending on the chosen privacy settings. Research by [Panek, Nardis, and Konrath \(2013\)](#) on *narcissism* and SNSs found that narcissism – the tendency to see yourself as important coupled with the drive to see this acknowledged by others – significantly predicted the number of Facebook status-updates as well as the amount of daily use. They noted that SNSs function as a “kind of technologically augmented megaphone” (p. 2010) since “various attributes of SNS make them seem like an ideal tool for achieving [these] narcissistic goals” (p. 2005). It is important to note here that the researchers are not saying that narcissism leads to increased use of social media or that social media use promotes narcissism, only that a definite relationship between the two exists. [Köbler, Riedl, Vetter, Leimeister, and Krcmar \(2010\)](#) found that among Facebook-users individuals use their status message function to actively reveal information about themselves, which helps/allows them to create a feeling of connectedness to their Facebook-friends. *Connectedness* is the feeling of belonging to a social group, implying creation of bonding relationships. [Ijsselstein, Van Baren, Markopoulos, Romero, and de Ruyter \(2009\)](#) defined connectedness as “a positive emotional appraisal of the quality (level of intimacy) and quantity (network size) of interactions within ongoing social relationships” (p. 476). “[T]he more individuals use their status message function to actively reveal information about themselves, the more connected they feel” ([Köbler et al., 2010](#), p. 1). Thus, a first reason why Facebook might not be the right tool for discussion and argumentation for knowledge construction is that a majority of the posts ([Ryan & Xenos, 2011](#)) is simply about “me, me, me”, not the best attitude if the goal is knowledge construction with others. [Nadkarni and Hofman \(2012\)](#) refer to this as a need for self-presentation, citing research showing a “positive association between narcissism and FB use, especially through FB profiles and photos, the features that allow excessive self-promotion ([Buffardi & Campbell, 2010](#))” (p. 245).

On top of this, “Facebook users tend to ‘friend’ people they know in real life. . . [creating] a set of norms that influence the size and type of a user’s audience ([Panek et al., 2013](#), p. 2010). Their collection of friends is expanded by the Facebook-function of suggesting possible new friends based, among other things, upon either ‘friends of friends’ or similar ‘likes’/following of thematic pages (e.g., The Skeptic’s Guide to the Universe, The Daily Show, International Society of the Learning Sciences) using a *recommender system* ([Drachler, Hummel, & Koper, 2008](#)). The system that Facebook uses produces recommendations for the user via what is called *collaborative filtering*; it collects and then analyses information about a user’s behaviors, activities or preferences to predict what (s)he will like based on their similarity to other users – and then recommends friends, groups, and other social connections to the user. It does this by examining the network of connections between a specific user and her/his friends. In other words, Facebook connects users with other users who have similar thoughts, ideas, likes/dislikes, and so further (i.e., friends) allowing them to view and share each other’s posts, post new things on each other’s timelines, and express their opinions either with emoticons, ‘thumbs up’, and/or comments. Facebook represents “a casual and non-intrusive form of communication to keep contact with

friends, to be up-to-date and to share ‘routine things’ . . . within a network of friends or peer individuals” ([Köbler et al., 2010](#), p. 7). While these friends may be may not be what one would call physical friends, and may even differ from each other, research ([Ellison, Steinfield, & Lampe, 2007](#)) has shown that it is often the case that Facebook friends are “people with whom they share an offline connection—either an existing friend, a classmate, someone living near them, or someone they met socially. . . than use involving meeting new people” (p. 1153). A network of friends based upon similarities, whether in real-life or virtual via Facebook, is not an entity which exudes the variety of and differences in viewpoints needed for argumentation. As a side note, it can go to the extreme in the opposite direction. Being surrounded by networks of like-minded people has been found to lead to what [Sunstein \(2009\)](#) calls ‘group polarisation’ where like-minded people discuss, confirm, validate and strengthen the group’s position. Thus, as second reason why Facebook is not the best tool for argumentation and discussion, is that to argue and discuss, one needs contrasting opinions and points of view.

More ‘technically’ speaking, related to the technical functionalities of Facebook, is that comments made by others about a person’s status-updates and reactions to these comments and so forth are nothing more than threads in a *flat-structured discussion board* or conversation; that is, they are not hierarchically organized or nested. This is a problem because human thinking:

may be symbolized as a more networking, weaving format. . . Branching and replying cause threaded discussions to become off track, and following a thread that has branched can be discombobulating and unnatural, which commonly, forces participants to initiate a new thread if they want to return to the initial topic. Flat-structured discussions require participants to read all postings to promote meta-cognition and self-regulated skills to achieve higher learning

[[Tu, Blocher, & Gallagher \(2010\)](#), p. 45]

In other words, the user often thinks “Where is everything; I can’t even find my own postings, let alone others?” Furthermore, such discussion boards do not allow users to “project themselves socially and emotionally, as ‘real’ people” (i.e., offer little *social presence*: [Garrison & Anderson, 2003](#), p. 94). *Cognitive presence* is also hampered since in many discussion boards “it is not possible to know who, if anyone, will be reading an utterance, when this will occur or, unless the user is permanently logged in to the discussion board and regularly hitting the refresh key, the moment at which this occurs” ([Farmer, 2004](#), p. 278). This is the case in Facebook where refreshing is necessary to see new postings though it is possible to receive email notifications of new posts depending on one’s settings. The need to refresh inhibits “the ability of a writer to reflect on [other’s] thoughts and “construct and confirm” meaning” (ibid. p. 277). Finally, discussion boards actually inhibit those processes needed for argumentation. Argumentation requires making claims and providing justification for them through the supply of evidence which must be connected to claims via warrants ([Toulmin, 1958](#)). The linear structure of a discussion board as Facebook does not really allow for this. Thus, here a third reason why Facebook can be seen as a poor environment for fruitful argumentation and discussion.

3. Can students use SNSs for knowledge construction and creation?

Often today’s youth – which has never known a world without digital media and who have been immersed in digital technologies all their lives – is described as having distinct and unique characteristics and skills which allow them to make use of these

technologies for learning and knowledge construction. According to Veen (2006), they are creative problem solvers, experienced communicators, self-directed learners, and digital thinkers. This myth that there exists a type of person that can be called a digital native or homo zappiëns – along with a number of other, very widespread and perseverant myths/legends in education – has been well refuted recently by Kirschner and Van Merriënboer (2013). The gist of the answer to whether students can use SNSs for knowledge creation is that while SNSs might give a learner the opportunity to construct or create knowledge with others, adolescents and young adults do not really know how to use them in that way. Margaryan, Littlejohn, and Vojt (2011), for example, found that students at university use a very limited range of technologies for learning and socialization. Other research studies (e.g., Bullen, Morgan, Belfer, & Qayyum, 2008; Ebner, Schiefner, & Nagler, 2008; Kennedy et al., 2007; Kvavik, 2005) found that college students do not have a deep knowledge of the technologies that they use, and that the knowledge that they have is often limited to how to use basic software packages such as word processors and presentation programmes, email, text messaging, posting on Facebook® and surfing the Internet. According to Bullen et al., students at university appear not to recognize “the enhanced functionality of the applications they own and use” (p. 7.7) and that they need significant training if they are to be expected to use technology for learning and problem-solving. They noted that when students use technology for learning, it was mostly used for the passive consumption of and reuse of information (e.g., looking up in Wikipedia® and then cutting and pasting what they found into new documents) or for retrieving notes of lectures from course management systems. Finally, Rowlands et al. (2008) came to the conclusion “...that much professional commentary, popular writing and PowerPoint® presentations overestimates the impact of ICTs on the young, and that the ubiquitous presence of technology in their lives has not resulted in improved information retrieval, information seeking or evaluation skills.” (p. 308).

A second problem is that, when used, social media can narrow the information vista instead of broadening it. Pariser (2011), for example, noted that users of social media filter the information that they receive according to who they perceive themselves to be and what they like. In doing this they increasingly live in what he calls their own, custom-made ‘filter bubbles’ creating their own unique universe of information. This, in turn, may lead to a form of *groupthink* (Janis, 1972; Whyte, 1952), a type of bias in which group pressures can cause the group and its group members either not to see or to ignore alternatives so as to minimize conflict and reach consensus, often without critical evaluation of alternative viewpoints. Ractham and Firpo (2011), note that Facebook is a strong example of a ‘wisdom of the crowd’ phenomenon calling it a “hive for collective groupthink” (p. 1). Since humans are social in nature, they influence and are influenced by others. Members of a group have a desire for harmony or conformity in the group. If we all do something in a certain way – that is to say it is popular within a group – then as humans we tend not question it because “that’s the way it is”. In other words, in contrast with the currently held notion that SNSs broadens and enriches its users, it might actually narrow and bias them.

Thus, it appears that adolescents and young adults are – euphemistically stated – not really capable of doing the things with SNSs that we expect them to do and that instead of broadening their ken, SNSs seem to narrow them.

4. Results of the studies in the Special Issue

In the first article in the Special Issue – *Learning from reading argumentative group discussions in Facebook – Rhetoric Style Matters*

(Again) – Asterhan and Hever (2015), used Facebook as a source of learning material and not as a tool. They used it, in their words, to “explore the potential of learning from reading discussions in social network settings”. This, in itself, is a novel and interesting way to use Facebook. However, instead of using already existing discussions, they chose to develop a fake argumentative discussion – either disputative (i.e., competitive) or deliberative (i.e., comparative) – between fictitious user on a closed, course-related Facebook group in which they also added links to information sources. Their rationale was that Facebook as social arena is a “hotbed of discussion” where “users are exposed to various types of often heated or controversial discussions... as well as external materials linked from those discussions”. Their goal was to see whether there is vicarious learning when reading the argument threads as opposed to using what they call “normative models of productive argumentation for learning”. What they found was that the declarative knowledge of the students was significantly lower in the disputative condition than in either the deliberative condition or the control condition (i.e., students who only read the sources and not the discussions), and no differences were found between the deliberative argumentation and the control conditions. In other words, using Facebook had either a negative effect on learning or no effect at all. Here a few comments: First, this is not typical of how people use Facebook; while there are examples of friends within a thread commenting and adding links, as discussed earlier, these comments and links are rare and when existent are usually supportive. Second, if Facebook is such a hotbed of discussion, why then was it necessary to create fake discussions? There should have been more than enough real examples. And finally, if just reading the information sources is as good as one form of Facebook argumentation, why use Facebook at all? Interesting here might be either to (1) ask students to look for real arguments “in the wild”, though this might be difficult as the ‘normal’ privacy settings for Facebook are such that status-updates are only visible to the users’ friends (see this article’s previous discussion on how friends post) or (2) supply different users with contrasting information and then allow them to discuss the issues with the use of the information sources and see whether real deliberative argumentation leads to better learning.

In *Scripts, individual preparation and group awareness support in the service of learning in Facebook: How does CSCL compare to social networking sites?* (Tsovaltzi, Judele, Puhl, & Weinberger, 2015), the authors investigated the influence of scripts and group awareness support on argumentative learning in Facebook. Students – in dyads – were given a text to learn and were supported in three studies with tools for awareness support, individual preparation and argumentation (i.e., scripts) as addenda to an application “with typical Facebook-like functionalities”. The Facebook-like environment allowed, for example, nested/hierarchical postings (i.e., something that Facebook does not have) and also had extra functions supporting an argumentation ontology (i.e., it allowed students to add and label claims, counterclaims, evidence, examples and research results). What they found was that individual preparation scripts and group awareness support negatively influenced learning. They note that though there were positive effects of using argumentation scripts, the scripts could not counterbalance the negative effects of either group awareness support or individual preparation. Very positive is that both topic specific attitude change (toward the topic discussed) and genre specific attitude change (toward argumentation itself as well as interaction in an SNS) occurred during argumentative learning. The gnawing question here is why one would choose to develop a closed, dyadic ‘Facebook-like’ application with a number of extra tools for collaborative argumentation instead of making use of a ‘good’ CSCL environment.

Greenhow, Menzer, and Gibbins (2015) examined whether an open-source social networking application (i.e., Hot Dish) that was implemented outside of the school would engage its users

in debating socio-scientific issues with the goal of facilitating development of scientific literacy. Their premise was that socio-scientific issue argumentation within Social Network Sites such as Facebook would support achieving scientific literacy because a considerable amount of such learning occurs through informal interactions with others using tools having features “that indicate how knowledge is displayed, engaged with, shared, and evaluated (e.g., positive summation in the ‘like’ feature)”. They implemented what they call a niche application – Hot Dish – which allows Facebook users to read, discuss, post and share news about climate change. In other words, this study made actual use of Facebook via a specifically designed Facebook-app. Their results are encouraging. They found that among users, there was evidence of emerging scientific literacy and that there were relationships between arguments, counterarguments, complexity, and conflict-oriented consensus building in the statements of the participants taking part in the environment, thus concluding that what they call “sophisticated learning” can and does occur within informal learning environments. And here is the caveat. Of the members of Hot Dish at the time the study was being carried out (1157) only 346 (30%) took part in the study and of them only 31 commented or responded to comments about a posted study. In other words, as would be expected based upon the earlier reported way that SNSs are normally used, less than 3% of the users actively engaged in the arguing and of those 31 “the majority of the comment strings were posted by a small handful of users”. Thus, while these results are encouraging, the proposed bridging of formal and informal learning which the authors seek to achieve still has a long way to go. Possibly, the authors can follow this up using Hot Dish as a tool in formal education and see whether larger groups of students who are required to use it exhibit an increase in scientific literacy. A second possible strand of research might be to link the development of scientific literacy with the children’s epistemic beliefs; their beliefs about the structure and certainty of knowledge, its sources and its justification (Buehl & Alexander, 2001).

Finally, Puhl, Tsovaltzi, and Weinberger (2015) looked at what they call “long-term effects of group awareness tools” combined with a script on gains in learning, effects on level of information processing and changes in attitude after longer periods of argumentative knowledge construction. In their study, they investigated the effects of a group awareness tool which they called a “tacit guidance” both alone and in combination with a moderately coercive script (see Kirschner, Beers, Boshuizen, & Gijsselaers, 2008) in Facebook to increase socio-cognitive conflict. They found a number of effects of their interventions on the processes and outcomes of argumentative learning with Facebook as well as some changes in attitudes. The learning gains attributable to the awareness tool, however, were on declarative knowledge and not procedural argumentative knowledge. This is not very strange if we go back to this article’s earlier discussion of the nature and use of Facebook, namely its typical use as more of a broadcast than as a discussion tool and the fact that its flat-structure is not really conducive to argumentation. Interesting here is that the interventions (awareness tool with and without the script) helped the learners attain “a more multi-perspective attitude”. Noteworthy is that the effect of the minimally coercive awareness tool alone continually, and on all measures, was equivalent to the effect of the awareness tool in combination with the moderately coercive script. Since this article concludes that there are long-term effects, it would be very interesting to see whether effects of the tool on learning and attitude change – that is whether in a new situation where the tool is not available similar results can be achieved – or whether the effects found are only effects with the tool.

5. Conclusions

The learning-related results of the studies in the Special Issue, thus, appear to show that there is a long road to travel down before SNSs like Facebook can be effectively and efficiently used as tools for knowledge construction and knowledge creation. The primary reason is possibly that the tools themselves are not really fit for doing what is wanted/expected and the ‘add-ons’ that the researchers used to increase and/or allow Facebook to fulfil this function do not appear to be effective. Going back to the original screwdriver/chisel analogy, the results show that even the improved screwdriver is not really a very good chisel. Second, the users themselves, though often very experienced in using SNSs, are not fluent or accomplished in using them as tools to build on existing knowledge and create new knowledge. Thus, even if the makers of the screwdriver were to sharpen and hone the blade, the users really only know how to use it as a screwdriver and not as a chisel.

Future research should not only deal with the two issues discussed, but should also try to answer the following questions: (1) Is argumentation via SNSs a means to gain knowledge or to construct/create new knowledge or is it a goal (i.e., mastering argumentation skills to gain and construct knowledge)?; (2) If it SNSs are usable, are they usable in an ecologically valid setting or do we always need to create an artificial situation?; and (3) If Facebook and SNSs are as good as people believe and even say that they are as learning environments or tools, why then do we need all of the different augmentations, add-ons, apps and artificial situations used both by the researchers here as well as elsewhere?

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